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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,185	04/02/2004	Hiroko Abe	12732-222001 / US7082	7858
26171	7590	08/14/2006	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			ROY, SIKHA	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/816,185	Applicant(s) ABE ET AL.	
	Examiner Sikha Roy	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 21-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0506, 0704, 0804, 1004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Species I claims 1-20 in the reply filed on May 30, 2006 is acknowledged.

Claims 21-40, are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species II, there being no allowable generic or linking claim.

The Preliminary Amendment submitted December 3, 2004 has been entered and acknowledged by the Examiner.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The disclosure is objected to because of the following informalities:

The section 'BRIEF DESCRIPTION OF THE DRAWINGS' should be inserted on page 7 before 'BEST MODE FOR CARRYING OUT THE INVENTION' according to the guidelines for preferred layout for the specification of a utility application.

Appropriate correction is required.

Furthermore the lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's

cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0151829 to Boroson et al. and further in view of U.S. Patent 7,034,451 to Senbonmatsu.

Regarding claim 1 Boroson discloses (Fig. 2B, para [0041], [0093], [00136], [00137]) a light emitting element comprising a cathode 50 and an anode 40 including an organic light emitting material in between and a color filter 52 formed over the second electrode 50 and wherein the light emitting element emits white light. Boroson further discloses (para [0037]-[0039]) depending on which side light is emitted from, the electrode can be selected to be transparent.

Boroson is silent about two polarizers having different polarization angles sandwiching the light emitting element and the filter.

Senbonmatsu in the same field of endeavor discloses (Figs. 1, 10 column 6 lines 29-65) an electronic apparatus comprising a light emitting element 2, two polarizers 4 and 5 sandwiching the light emitting element, wherein the anode and the cathode (Fig. 8) both transmit light and the deflection angles of the two polarizers are different from each other. Senbonmatsu teaches (column 4 lines 36-67) light is emitted externally through the polarizers from both sides of the display such that an observer from each side visually identifies the transmitted light as polarized light, the external light incident from other side gets absorbed while passing through the polarizer and thus enhances the contrast of the display. This configuration thus provides a double-sided self-light emitting display device with enhanced contrast.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the light emitting element with a color filter of Boroson sandwiched between two polarizers and having both the cathode and anode transmitting light as taught by Senbonmatsu for providing an electronic apparatus with double-sided self-light emitting display and enhanced contrast.

Regarding claims 2- 4 Boroson teaches (para [0059], [0071]) the first light emitting layer 44 (hole transporting layer) is formed of the same material 4, 4'-Bis [N- (1-Naphthalenyl)-N-phenylamino] biphenyl (α -NPD) as the first light emitting layer 503 of the instant application (See [055] of the instant application). Therefore, the layer 44 which, constitutes a similar material and structure as that of the first light emitting layer, inherently exhibits blue emission with maximum intensity in a wavelength region of at least 400 and at most 500 nm. Further, Boroson teaches (para [0093] and [0110]) the

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phosphorescent material of the second light emitting layer 46 is an organic metal complex with platinum as a central metal (last chemical structure L48 in para [0110]) and the phosphorescent material is also doped with 10 wt.% to the host material. Applicant teaches (page 18, section [0058] of instant application) if the phosphorescent material is an organic metal complex with platinum as a central metal and doped with 10wt% to the host material, this phosphorescent material will generate phosphorescent emission and excimer emission simultaneously and has an emission spectrum with at least two intensity peaks in a wavelength region of at least 500 nm and at most 700 nm. As such, the second light-emitting layer 46 can perform the claimed function.

Regarding claim 5 Senbonmatsu discloses (Fig. 12) the electronic apparatus used in a portable phone.

Regarding claim 6 Boroson and Senbonmatsu disclose the claimed invention except two color filters on two sides sandwiching the light emitting device. Boroson teaches (para [00136]) the color filter can be red, green or blue filter to permit only a desired color to pass and be seen by the viewer. It is noted that this device of Boroson and Senbonmatsu emits light from two sides and hence it would have been obvious to include a color filter on each side and hence two color filters sandwiching the light emitting element so that any desired color can be seen by the viewer.

Claims 7-10 essentially recite the same limitations as of claims 2-5 and hence are rejected for the same reasons (see rejection of claims 2-5).

Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0151829 to Boroson et al., U.S. Patent 7,034,451 to Senbonmatsu and further in view of U.S. Patent 6,356,029 to Hunter.

Regarding claim 11 Boroson and Senbonmatsu discloses an electronic device with all the limitations same as of claim 1. Boroson and Senbonmatsu do not exemplify the first and second transistors, first transistor for determining current value supplied to the light emitting element and second transistor for selecting emission or non-emission states, the first and second transistors being connected in series between the power supply and light emitting element and the gate of the first transistor connected to the first power supply.

Hunter in pertinent art of active matrix EL display device discloses (Fig. 5 column 5 line 45 through column 6 line 5) a first transistor 22 for determining a current value supplied to the light emitting element 20 and a second transistor 40 for selecting emission and non-emission, first and second transistors are connected in series between a first power supply and the light emitting element 20 wherein the gate of the first transistor is connected to the first power supply. Hunter further teaches (column 2 lines 13-30) that this configuration of driving the EL elements in an active matrix display provides appropriate compensation for the effects of aging of display elements so that desired light output level for a given applied drive signal is maintained regardless of possible variations in the drive current level/light output level characteristics of individual display elements in the array.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include first and second transistors, first transistor for determining current value supplied to the light emitting element and second transistor for selecting emission or non-emission states, the first and second transistors being connected in series between the power supply and light emitting element and the gate of the first transistor connected to the first power supply of the electronic apparatus of Boroson and Senbonmatsu as taught by Hunter for providing appropriate compensation for the effects of aging of display elements so that desired light output level for a given applied drive signal is maintained regardless of possible variations in the drive current level/light output level characteristics of individual display elements in the array.

Claims 12-15 essentially recite the same limitations as of claims 2-5 and hence are rejected for the same reasons (see rejection of claims 2-5).

Claim 16 essentially recites the limitations of claim 11 and claim 6 and hence is rejected for the same reasons (see rejection of claims 6 and 11).

Claims 17-20 essentially recite the same limitations as of claims 2-5 and hence are rejected for the same reasons (see rejection of claims 2-5).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,762,436 to Huang et al. discloses double-side

display structure for organic light emitting diodes. U.S. Patent Application Publication 2002/0093284 to Adachi et al. discloses light emitting from an EL display having color filters and a polarizer. U.S. Patent 6,774,877 to Nishitoba et al. discloses first and second transistors connection to EL device for providing active matrix array.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sikha Roy

Sikha Roy
Patent Examiner
Art Unit 2879